

ABSTRACT

This disclosure provides a system for obtaining genetically altered primate pluripotent stem (pPS) cells. The pPS cells are maintained in an undifferentiated state by culturing on a feeder cell line that has been immortalized and altered with drug resistance genes. Alternatively, the role of the feeder cells is replaced by supporting the culture on an extracellular matrix, and culturing the cells in a conditioned medium. The cells can be genetically altered with a viral vector or DNA/lipid complex, and then selected for successful transfection by drug-resistant phenotype in the transfected cells. The system allows for bulk proliferation of genetically altered pPS cells as important products for use in human therapy or drug screening.

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